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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/080,744

02/22/2002

Allan Wallace

24,577-18

8415

7590

10/13/2004

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EXAMINER

THOMPSON, JEWEL VERGIE

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 10/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/080,744

Applicant(s)

WALLACE, ALLAN

Examiner

Jewel V Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5/28/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. Acknowledgement is made of the Information Disclosure Statement filed May 28, 2002, which has been made record of and placed in the file.

Election/Restrictions

2. Applicant's election without traverse of claims 1-5 and 19-20 in the reply filed on June 29, 2004 is acknowledged.

Claims 6-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 29, 2004.

Claim Objections

3. Claim 4 is objected to because of the following informalities:

Claim 4 has not previously claimed "the deformable element.

Claim 4 is ambiguous. Examiner is not quite sure what is meant by "between abput – 101/min"

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-5 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sparks (5,663,508).

Regarding claim 1, Sparks teaches a fluid flow sensing apparatus (10), comprising: a flow-responsive element (18) projecting into a fluid flow path; and a position sensor (26) in communication with the element to detect a change in position of the element in response to a fluid flow (col. 3, lines 52-56).

Regarding claim 2, Sparks teaches the apparatus has a sensitivity that is generally inversely related to a pressure generated by the fluid flow (col. 5, lines 4-18).

Regarding claim 3, Sparks teaches the flow-responsive element can change position in more than one direction (col. 2, lines 13-16).

Regarding claim 4, Sparks teaches the deformable element deforms when the fluid flow is at a rate of between about -10 l/min (col. 4, lines 29-43).

Regarding claim 5, Sparks teaches the sensor is in communication with a fluid flow controller.

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Regarding claim 24, Sparks teaches a fluid pathway (fig. 3); a deformable element (18) projecting into the fluid pathway (fig. 3); and a position sensor (26) adapted to detect deformation in the deformable element.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparks (5,663,508).

Regarding claim 19, Sparks fails to explicitly teach the element being supported at a zero-flow position in response to a fluid flow; the element further being biased into the zero-flow position in the absence of a fluid flow; and a position sensor for detecting a change in position of the flow-responsive element relative to the zero-flow position. However, Sparks does teach in col. 3, lines 36-42 that the vane is adapted to be cantilevered from the base. The vane is adapted to be deflected in response to fluid flow that impinges either of its broader surfaces, such that the sensor is capable of bi-directional operation. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have known that at the point of no fluid flow, the element is being supported by the base and as the fluid flows there is a deflection of the

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element of Sparks for the purpose of determining the fluid flow by the deflection of the element based on a position of no flow.

Regarding claim 20, Sparks teaches the apparatus has a sensitivity that is generally inversely related to a pressure generated by the fluid flow (col. 5, lines 4-18).

Regarding claim 26, Sparks fails to explicitly teach 26 the position sensor is adapted to communicate with a gas delivery device. However, Sparks does teach in the abstract that the flow sensor is such that its sensitivity can be readily modified during its manufacture in order to optimize the sensor for its intended use. It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the sensor of Sparks for an intended use of gas delivery for the purpose of determining the amount a gas to flow in a device.

Claim Rejections - 35 USC § 103

6. Claims 21-23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sparks in view of Gruenke et al (5,259,373).

Regarding claim 21, Sparks fails to teach a mask portion; a hose, the hose cooperating with the mask portion to define an air pathway. Gruenke et al teaches a mask portion (14) and a hose (12), the hose cooperating with the mask to define an air pathway (figs. 2 and 4). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have placed the mask and hose of Gruenke et al in the flow sensor of Sparks for the purpose of detecting a patient airway sounds.

Regarding claims 22 and 25 Sparks fails to teach the position sensor includes a Hall effect sensor. Gruenke et al teaches a Hall effect sensor (col. 10, lines 63-68). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the Hall effect sensor of Gruenke et al in place of the piezoresistive sensors of Sparks for the purpose of providing a pulse count which determines the speed of the motor.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sparks in view of Gruenke et al as applied to claim 21 above, and further in view of Neukermans et al.

Regarding claim 23, Sparks in view of Gruenke et al fails to teach a torsion strip. Neukermans et al teach a torsion strip (24). It would have been obvious to one of ordinary skill in the art at the time that the invention was made to have used the torsion strip of Gruenke et al in the flow sensor of Sparks for the purpose ensuring that the van rotates about the common axis upon application of a torque (col. 4, lines 8-10)

Conclusion

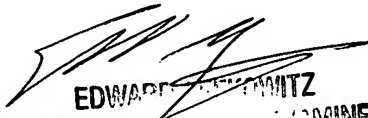
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jewel V Thompson whose telephone number is 571-272-2189. The examiner can normally be reached on 7-4:30, off alternate Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jvt
September 20, 2004


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